

**REMARKS/ARGUMENTS**

Applicant has received the Office Action dated December 13, 2007, in which the Examiner: 1) objected to claims 2-8, 23 and 27 as being dependent upon a rejected base claim, but otherwise allowable; 2) rejected claims 1, 15-17 and 28-30 under 35 U.S.C. § 103(a) as being obvious over Zhang et al. (*K-Harmonic Means – A Data Clustering Algorithm*, hereinafter “Zhang”) in view of Arning (U.S. Pub. No. 2003/0145000); 3) rejected claims 18-22, 25 and 26 as being obvious over Zaki (*Workshop report: large-scale parallel KDD systems*) in view of Zhang and Arning; and 4) rejected claim 24 as obvious over Zaki in view of Zhang. With this Response, Applicant has amended claim 18 and canceled claims 19-21.

**I. THE OBVIOUSNESS REJECTIONS OF CLAIMS 1, 15-17 AND 28-30**

Claim 1 requires “iteratively applying a regression algorithm and a K-Harmonic Means performance function on the set number of functions to determine a pattern in said dataset.” Claim 1 thus requires the combination of “regression” with K-Harmonic Means. The Examiner concedes that the Zhang Reference does not disclose “regression.” Instead, the Examiner turns to Arning and believes that the claimed combination of regression with K-Harmonic Means is obvious.

It is possible to combine regression with a number of different algorithms such as K-Means, expectation maximization (EM) or, as conceived by Applicant, K-Harmonic Means. To the extent that the Examiner believes the combination of regression with K-Harmonic Means is obvious, given the other possible choices, the Examiner’s argument is clearly, and improperly, based in hindsight gleaned from Applicant. *See e.g., In re Dembiczak*, 175 F.3rd 994, 999 (Fed. Cir. 1999) (reversing the Examiner and precluding the PTO from falling victim to the “insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher”).

Applicant previously submitted (with the previous appeal brief) a publication, authored by the inventor, entitled “Regression Clustering” (Bin Zhang, Proceedings of the 3<sup>rd</sup> IEEE International Conference on Data Mining (ICDM

2003), 19-22 December 2003, Melbourne, Florida, pp. 451-458) that shows that the regression/K-Harmonic Means combination works better than the combination of regression with either K-Means or EM. See section 12 Conclusions. The inventor determined that K-Harmonic Means-based regression is better than certain other types of regression (*e.g.*, K-Means and EM-based regression). As a result, the inventor filed the present application to cover, at least in part, K-Harmonic Means-based regression. The Examiner is now improperly using the inventor's own hard-work and teachings against the claims. For at least these reasons, claim 1 is allowable over Zhang in view of Arning.

Claim 15 also requires a combination of regression and K-Harmonics. Specifically, claim 15 requires a processor to "regress functions correlating variable parameters..." and "cluster the functions using a K-Harmonic Mean performance function." The Examiner conceded that Zhang does not teach regression. As explained above, it would not have been obvious to include the use of K-Harmonic Means with regression. For at least these reasons, claims 15-17 are allowable over Zhang in view of Arning.

Claim 28 requires applying a regression clustering algorithm to distributed datasets. The Examiner admitted that Zhang does not teach regressive clustering, but turned to Arning instead. Applicant respectfully submits that the Examiner's analysis is flawed as explained above. For at least this reason, claims 28-30 are allowable over Zhang in view of Arning.

## **II. THE OBVIOUSNESS REJECTIONS OF CLAIMS 18-22, 25, AND 26**

Applicant amends claim 18 to require the combination of regressive clustering and K-Harmonic Means which, as explained previously is not taught or suggested by the combination of Zhang and Arning. Further, Zaki is deficient in this regard.

Claims 25-26 depend from claim 24. As explained below, claim 24 is allowable over the combination of Zaki and Zhang. Arning does not satisfy the deficiency of Zaki and Zhang. For at least this reason, claims 25-26 are in condition for allowance.

**III. THE OBVIOUSNESS REJECTIONS OF CLAIM 24**

Claim 24 requires the processor to “mine the datapoints of the data sources as a whole without transferring all of the datapoints between the data sources and the central station to thereby determine a pattern in datapoints contained in said data sources.” The Examiner admitted that Zaki lacks this limitation and, instead, turned to the Abstract of Zhang. However, Applicant finds no such teaching in the Abstract of Zhang. For at least this reason, claim 24 is in condition for allowance.

**IV. CONCLUSION**

Applicant respectfully requests reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,

/Jonathan M. Harris/

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